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10/021,080	12/19/2001	Michael Best	11922-US	8725

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EXAMINER

MITCHELL, JASON D

ART UNIT

PAPER NUMBER

2193

DATE MAILED: 11/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/021,080	BEST ET AL.	
	Examiner	Art Unit	
	Jason Mitchell	2193	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 29 July 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-9, 11-20 and 22-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9, 11-20 and 22-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 July 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

### **DETAILED ACTION**

This action is in response to remarks filed on 7/29/05.

At Applicant's request, claims 1-9, 11-14, 16, 18 and 22-23 have been amended.

Claims 10 and 21 have been canceled. Claims 1-9, 11-20 and 22-24 are pending in this application.

### ***Drawings***

Applicant's amended drawing sheet and arguments were sufficient to overcome the objections to the drawings, which are consequently withdrawn.

### ***Claim Objections***

Applicant is advised that should claim 1 be found allowable, claim 11 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claims 1 and 11 respectively recite 'a framework' and 'an apparatus', each of which would be considered a 'machine' under 35 U.S.C. 101. Amendment of one of the claims to recite 'a computer program product' (manufacture) would overcome this problem.

***Response to Arguments***

**Applicant's arguments on pg. 10 regarding the rejection to the drawings under 37 CFR 1.84(p)(5) have been fully considered and are persuasive. The objection has been withdrawn.**

**Applicant's arguments alleging a distinction between claims 1 and 11 have been fully considered but they are not persuasive.**

The amendments were not effective in removing either claim 1 or 11 from the statutory classification of 'Machine'.

**Applicant's arguments alleging Haggerty's failure to disclose 'run-time registration of at least one plug-in' have been fully considered but they are not persuasive.**

Applicant states:

It is the Examiner's position that the Haggerty reference teaches the registry for run-time registration of at least one plug-in brokering access to network management and service provisioning enabling technology, the Examiner pointing to "...topology objects [being] created through Open View Map additions to the MOM or by auto discovery" on page 76 column 1 paragraph 2 in the Haggerty reference. The Examiner seems to rely on the term "topology objects" for raising objections to the novelty of the single managed entity object class as well for raising objections to the novelty of enabling technology plug-ins. The examiner is respectfully directed to paragraph [0029] for the definitions of managed entities and enabling technologies and the differences there between.

Respectfully, Examiner notes that Applicant's paragraph [29] does not explicitly disclose 'network management and service provisioning enabling technologies' but instead defines 'Network management and service provisioning software applications' and

'Network management enabling technologies'. It is the later definition, which was used to determine the scope of the limitation. Further, Haggerty's disclosure in the last paragraph in the second column of pg. 75 ('Managed Objects, which represent network entities and resources') indicates that Haggerty's topology objects represent both 'managed entities' ('network entities') and 'network management and service provisioning enabling technologies' ('resources').

Applicant goes on to state:

The Examiner is respectfully directed to a description of Open View map program presented on page 72 in the first paragraph of column 2 where Haggerty states that the Open View map program is a "consumer" of information generated by the proposed deployment. The applicant respectfully submits that consumers of information generated by the Haggerty proposed solution are different from network management and service provisioning enabling technologies as defined in paragraph (0029) of the application.

Respectfully, Examiner notes that Haggerty's 'Open View map program' represents a 'network management and service provisioning software application' and was not intended to anticipate 'managed entities' or 'network management and service provisioning enabling technologies'.

Applicant states:

Haggerty clearly teaches away from run-time registrable plug-ins in footnote 1 stating that the intention was to implement support for CMIP as a CORBA-gateway.

Examiner respectfully disagrees. Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the disclosure 'teaches away from' the limitations recited in the claims. Further, the 'CORBA-CMIP gateway pointed to by Applicant was explicitly 'not considered' and consequently should have no effect

Art Unit: 2193

on the teachings of Haggerty. Still further, as was noted above, the OpenView component of Haggerty's system is not responsible for 'registration of the plug-ins' and, consequently discloses no teachings one way or the other regarding 'registration of the plug-ins'.

Applicant goes on to state:

Further, it is clear from Haggerty's description of the Event Service on page 75 column 1 paragraph 3 and the description of the Trap Service Manager on the same page column 2 paragraph 2 that SNMP (an enabling technology) is hardcoded (as opposed to run-time loaded and registrable) in the solution proposed by Haggerty.

Examiner respectfully notes that Haggerty's 'Event Service' and 'Trap Service Manager' are not the aspects of Haggerty's disclosure that are relied upon for anticipation of 'run-time registration'.

**Applicant's arguments alleging Haggerty's failure to disclose 'a generic lexical analyzer augmented with the lexical analyzer stub' have been considered but they are moot in view of the new grounds of rejection.**

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 1-3, 6-9, 11-20 and 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over “The Benefits of CORBA-Based Network Management” by Haggerty and Seetharaman (Haggerty) in view of US 202/0100016 to Van De Vanter et al. (Van De Vanter).**

**Regarding Claims 1 and 11:** Haggerty discloses (a.) a registry for run-time registration of at least one plug-in brokering access to network management and service provisioning enabling technologies (pg. 76, col. 1, par. 2 ‘The topology objects are created through OpenView Map additions to the MOM or by auto discovery’); (c.) an implementation of a single managed entity object class (pg. 76, col. 2, par. 5 ‘All objects in the model derive from one base object called a Managed Object’), the single managed entity object class being run-time derivable via type derivation (pg. 76, col. 1, par. 2 ‘The topology objects are created ... by auto discovery’) into a hierarchy of managed data network object types based on a first parsed directive (pg. 77, col. 1, par. 1 ‘higher level objects’); (e.) an interpreter for processing messages received from at least one network management and service provisioning software application (pg. 78, col. 2, par. 2 ‘integrates with OpenView’), the message including a third directive employed to invoke at least one method of a corresponding managed data network object instance (pg. 78, col. 2, par. 2 ‘user interfaces can be launched from OpenView’); separation being achieved between managed entities, enabling technologies and software applications (Fig. 4), the separation enabling independent development, maintenance and troubleshooting of network management and service provisioning deployments (pg. 79, col. 1, par. 1 ‘ProSphere network management system ... leads to

an extremely open, extensible and distributed solution') minimizing the need to re-code and re-compile framework software application code in support of new managed entity object types (pg. 77, col. 1, par. 1 'adding support for new equipment requires only creating a new object definition, which fits into the model'). Haggerty does not explicitly disclose a parser/lexical analyzer for processing managed data network entity specification/directive, or augmenting the lexical analyzer with a plug-in specific lexical analyzer stub. However some form of parsing and lexical analysis would be necessary for his system to import, convert and understand the added plug-ins (pg. 76, col. 1, par. 2 'The topology objects are created through OpenView Map additions to the MOM or by auto detection').

Van De Vanter teaches a generic lexical analyzer (par. [0066] 'AbstractLexer 350') augmented with a lexical analyzer stub (par. [0066] 'Lexer 340') in an analogous art for the purpose of facilitating 'on-the-fly specialization' (par. [0061]).

It would have been obvious to a person of ordinary skill in the art at the time of the invention to use generic and specific lexical analyzers as taught in Van De Vanter (par. [0066]) to add new plug-ins ('topology objects') to Haggerty's managed object collection, because the 'separation of core functionality form ... specific functionality facilitates on-the-fly specialization' (par. [0061]) as required by Haggerty (pg. 76, col. 1, par 2 'auto detection'). Further, one of ordinary skill would recognize that parsing is a first, and necessary, step to any lexical analysis.



**Regarding Claim 2:** The rejection of claim 1 is incorporated; further Haggerty discloses the single managed entity object class is an abstract managed object class (pg. 76, col. 2, par. 4 'The ProShpere architecture defines an abstract set of CORBA objects').

**Regarding Claim 3:** The rejection of claim 1 is incorporated; further while Haggerty does not explicitly disclose the specification includes at least one attribute, he does disclose that the object being derived from the specification allows for attributes (pg. 77, col. 1, par. 1 'the derived objects ... implement most of their properties and functions'). It would therefore have been obvious to a person of ordinary skill in the art at the time of the invention to include specification of at least one attribute in the specification.

**Regarding Claim 6:** The rejection of claim 1 is incorporated; further while Haggerty does not explicitly disclose the first directive includes an attribute specification, he does disclose that the object being derived from the specification allows for attributes (pg. 77, col. 1, par. 1 'the derived objects ... implement most of their properties and functions'). It would therefore have been obvious to a person of ordinary skill in the art at the time of the invention to include at least one directive specifying at least one attribute.

**Regarding Claim 7:** The rejection of claim 6 is incorporated; further while Haggerty does not explicitly disclose the attribute specification further specifies managed entity object type inheritance, he does disclose that the object being derived from the specification allows for inheritance (pg. 77, col. 1, par. 1 'higher level objects implement most of their properties and functions'). It would therefore have been obvious to a person of ordinary skill in the art at the time of the invention to further specify managed entity object type inheritance.

**Regarding Claim 8:** The rejection of claim 1 is incorporated; further Haggerty discloses the network management and service provisioning enabling technologies include support for at least one of a persistence method and a persistence entity (pg. 76, col. 1, par. 2 'The topology objects ... contain information pertaining to addressing, type, uniqueness, resources, and status').

**Regarding Claim 9:** The rejection of claim 1 is incorporated; further Haggerty discloses the second directive further specifies a command sequence to be followed in using a specific registered enabling technology (pg. 76, col. 1, par. 2 'The topology objects ... contain information pertaining to addressing, type, uniqueness, resources, and status').

**Regarding Claim 12:** Haggerty discloses (b.) deriving a single managed entity object class into a managed entity object type hierarchy of at least one managed data network object type via type derivation in accordance with a first directive parsed from the managed data network entity specification (pg. 76, col. 2, par. 5 'All objects in the model derive from one base object called a Managed Object'); and (c.) registering with a network management and service provisioning framework at least one plug-in brokering access to at least one network management and service provisioning enabling technology (pg. 76, col. 1, par. 2 'The topology objects are created through OpenView Map additions to the MOM or by auto discovery'); and (e.) processing at least one message received by the framework from at least one network management and service provisioning software application (pg. 78, col. 2, par. 2 'integrates with OpenView'), the message including a third directive employed to invoke at least one method of a corresponding managed data network object instance (pg. 78, col. 2, par. 2

'user interfaces can be launched from OpenView'); the framework acting as an enabler by separating managed data network entities, enabling technologies and software applications (Fig. 4), as well acting as a facilitator therebetween in providing the network management and service provisioning solution (pg. 79, col. 1, par. 1 'ProSphere network management system ... leads to an extremely open, extensible and distributed solution').while minimizing the need to re-code and re-compile code in support of new managed entity object types (pg. 77, col. 1, par. 1 'adding support for new equipment requires only creating a new object definition, which fits into the model');

**Regarding Claim 13:** The rejection of claim 12 is incorporated; further Haggerty discloses processing the at least one message received by the framework, the method comprises a further step of deriving a containment hierarchy of managed data network type instances corresponding to field installed data network equipment (Fig. 4).

**Regarding Claim 14:** The rejection of claim 12 is incorporated; further Haggerty discloses registering with the framework at least one plug-in, the method further comprises a step of run-time registering the at least one plug-in (pg. 76, col. 1, par. 2 'The topology objects are created through OpenView Map additions to the MOM').

**Regarding Claim 15:** The rejection of claim 14 is incorporated; further Haggerty discloses wherein run-time registering the at least one plug-in, the method further comprises a prior step of: selecting the at least one plug-in for registration thereof (pg. 76, col. 1, par. 2 'The topology objects are created through OpenView Map additions to the MOM').

Art Unit: 2193

While Haggerty does not explicitly disclose selecting the at least one plug-in for registration thereof, It would have been obvious to a person of ordinary skill in the art at the time of the invention to provide a user with the ability to select the at least one plug-in for registration thereof, instead of having to re-define the managed data network entity prior to adding it to the MOM.

**Regarding Claim 16:** The rejection of claim 12 is incorporated; further Haggerty discloses a step of: prior to parsing the at least one managed data network entity; run-time loading the at least one managed data network entity specification (pg. 76, col. 1, par. 2 'The topology objects are created through OpenView Map additions to the MOM'). Note that in order to parse a thing that thing must first be loaded; otherwise the parser cannot interact with it.

**Regarding Claim 17:** The rejection of claim 16 is incorporated; further Haggerty discloses run-time loading the at least one managed data network entity specification, the method further comprises a prior step of: selecting the at least one managed data network entity specification (pg. 76, col. 1, par. 2 'The topology objects are created through OpenView Map additions to the MOM').

While Haggerty does not explicitly disclose selecting the at least one managed data network entity specification, It would have been obvious to a person of ordinary skill in the art at the time of the invention to provide a user with the ability to select the at least one managed data network entity specification instead of having to re-define the managed data network entity prior to adding it to the MOM.

**Regarding Claim 18:** The rejection of claim 12 is incorporated; further Haggerty discloses wherein parsing, the method further comprises a step of: extracting at least one directive from the at least one managed data network entity specification, the at least one managed data network entity specification being associated with at least one managed entity object type (pg. 77, col. 1, par. 1 'higher level objects implement most of their properties and functions').

Haggerty does not explicitly disclose extracting at least one directive from the data network entity specification said directive being associated with at least one managed entity object type, however this association is inherent in his disclosure on pg. 77, col. 1, par. 1 'higher level objects implement most of their properties and functions'. Without a directive associated with at least one managed entity object type, inheritance as disclosed could not be established.

**Regarding Claim 19:** The rejection of claim 12 is incorporated; further Haggerty discloses wherein deriving the single managed entity object class via type derivation, the method further comprises a step of setting at least one attribute (pg. 77, col. 1, par. 1 'the derived objects ... implement most of their properties and functions').

**Regarding Claim 20:** The rejection of claim 12 is incorporated; further Haggerty discloses wherein prior to processing the at least one message received by the framework from the at least one software application, the method further comprises a step of: registering the at least one software application with the framework (Fig. 2, ProSphere Application Objects').

**Regarding Claim 22:** the rejection of claim 12 is incorporated; further Haggerty discloses wherein implementing the third directive, the method further comprises a step of: instantiating managed entity object types (pg. 76, col. 1, par. 2 'The topology objects are created through OpenView Map additions to the MOM').

**Regarding Claim 23:** The rejection of claim 21 is incorporated; further Haggerty discloses wherein implementing the one of the second and third directive the method further comprises a step of: effecting a change in a network state of a managed data transport network in a realm of management (pg. 78, col. 1, par. 1 'The ProSphere user interfaces use the compiled stubs from IDL to interact with the objects').

**Regarding Claim 24:** The rejection of claim 12 is incorporated; further Haggerty discloses wherein subsequent to processing the at least one message received by the framework; the method further comprises a step of: sending a message to the software application (pg. 78, col. 2, par. 2 'integrates with OpenView').

**Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over "The Benefits of CORBA-Based Network Management" by Haggerty and Seetharaman (Haggerty) in view of US 202/0100016 to Van De Vanter et al. (Van De Vanter) further in view of US 5,911,076 to Acker et al (Acker).**

**Regarding Claim 4:** The rejection of claim 1 is incorporated further Haggerty does not disclose the managed data network entity specification includes a human readable file but does disclose the use of an IDL (pg. 76, col. 2, par. 5 'The managed object supports an IDL interface')

Acker teaches that the SOM compiler generates a human-readable file (col. 5, lines 27-30 'the output forms can be ... a documentation file ... a printed interface description') from an Interface Definition Language (IDL) definition (col. 5, lines 7-8 'The SOM compiler reads the IDL definition of a class interface and generates several different output files') in an analogous art for the purpose of documenting the interfaces of classes.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to use a compiler as taught in Acker (col. 5, lines 7-8) to generate the IDL interfaces disclosed in Haggerty (pg. 76, col. 2, par. 5) thereby producing the 'printed interface description', because one of ordinary skill in the art would have been motivated to provide documentation for the interfaces (col. 5, lines 27-30)

**Regarding Claim 5:** The rejection of claim 3 is incorporated further Haggerty does not disclose discloses the human-readable file is an attribute file holding attributes corresponding to a single managed entity object type but does disclose the use of an IDL (pg. 76, col. 2, par. 5 'The managed object supports an IDL interface').

Acker teaches the human-readable file is an attribute file holding attributes corresponding to a single managed entity object type (col. 5, lines 27-30 'the output forms can be ... a printed interface description') in an analogous art for the purpose of documenting the interfaces of classes.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to use a compiler as taught in Acker (col. 5, lines 7-8) to generate the IDL interfaces disclosed in Haggerty (pg. 76, col. 2, par. 5) thereby producing the 'printed

Art Unit: 2193

interface description', because one of ordinary skill in the art would have been motivated to provide documentation for the interfaces (col. 5, lines 27-30).

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Mitchell whose telephone number is (571) 272-3728. The examiner can normally be reached on Monday-Thursday and alternate Fridays 7:30-5:00.




Art Unit: 2193

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki can be reached on (571) 272-3719. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jason Mitchell  
10/19/05



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